Listing of Claims:

1.-43. (Cancelled)

44. (Currently Amended) An article comprising <u>a machine-accessible medium having stored thereon</u> <u>instructions that, when executed by a machine, cause the machine:</u>

~~a storage medium having stored thereon a look up table, said table comprising a relationship~~ ~~between the number of bits and variation in pixel signal values of a plurality of video images for a variety~~ ~~of quantization step sizes;~~

~~wherein said storage medium further includes instructions stored thereon~~ to employ ~~the~~ <u>a</u> look up table and a bit budget to perform video encoding rate control<u>, said table comprising a relationship</u> <u>between the number of bits and variation in pixel signal values of a plurality of video images for a variety</u> <u>of quantization step sizes</u>.

45. (Original) The article of claim 44, wherein the look up table is employed to perform video encoding rate control when the instructions are executed by a processor.

46. (Previously Presented) The article of claim 45, wherein the variation in pixel signal values comprises the sum of absolute differences (SAD).

47. (Previously Presented) A method comprising:

obtaining a measurement of variation in pixel values for at least a portion of a video image; and

using the measurement of variation in pixel values as an index to a lookup table to determine a quantization value to be used in encoding the video image, the lookup table comprising a relationship between video encoding rate and variation in pixel signal values.

48. (Previously Presented) The method of claim 47, wherein:

quantization value comprises quantization step size;

video encoding rate comprises a number of bits needed to encode the portion of video image;

and

the table comprises a relationship between the number of bits and variation in pixel signal values of a plurality of video images for a plurality of quantization step sizes.

49. (Previously Presented) The method of claim 48, wherein the plurality of video images comprise video images including different types of macroblocks.

50. (Previously Presented) The method of claim 49, wherein the types comprise at least one of the following: intra, inter, 4 MV, and B.

51. (Previously Presented) The method of claim 47, wherein the measurement of the variation comprises at least one of the following: the sum of absolute differences (SAD) of the pixel signal values, and/or a quantization value of the SAD of the pixel signal values.

52. (Previously Presented) The method of claim 47, wherein the portion of the video image comprises a macroblock.

53. (Previously Presented) A device comprising:

a mechanism to obtain a measurement of variation in pixel values for at least a portion of a video image; and to use the measurement of variation in pixel values as an index to a lookup table to determine a quantization value to be used in encoding the video image, the lookup table comprising a relationship between video encoding rate and variation in pixel signal values;

wherein said mechanism is implemented within a video encoder.

54. (Previously Presented) The device of claim 53, wherein said video encoder is implemented in silicon on at least one integrated circuit.

55. (Previously Presented) The device of claim 54, wherein the silicon implementation of said video encoder comprises microcode.

56. (Previously Presented) The device of claim 54, wherein the silicon implementation of said video encoder comprises firmware.

57. (Previously Presented) The device of claim 53, wherein said video encoder is implemented in software capable of executing on a processor or a microprocessor.

58. (Currently Amended) An article comprising: a storage medium, said a machine-accessible medium having stored thereon instructions that, when executed, cause a machine to:

obtain a measurement of variation in pixel values for at least a portion of a video image; and

use the measurement of variation in pixel values as an index to a lookup table to determine a quantization value to be used in encoding the video image, the lookup table comprising a relationship between video encoding rate and variation in pixel signal values.

59. (Previously Presented) The article of claim 58, wherein:

quantization value comprises quantization step size;

video encoding rate comprises a number of bits needed to encode the portion of video image; and

the table comprises a relationship between the number of bits and variation in pixel signal values of a plurality of video images for a plurality of quantization step sizes.

60. (Previously Presented) The article of claim 59, wherein the plurality of video images comprise video images including different types of macroblocks.

61. (Previously Presented) The article of claim 60, wherein the types comprise at least one of the following: intra, inter, 4 MV, and B.

62. (Previously Presented) The article of claim 59, wherein the measurement of the variation comprises at least one of the following: the SAD of the pixel signal values, and/or a quantization value of the SAD of the pixel signal values.

63. (Previously Presented) A system comprising:

a video encoder;

a video input device coupled to said video encoder; and

memory;

wherein said memory is coupled to said video encoder to store video encoded by said video encoder; and

wherein said video encoder includes a mechanism to obtain a measurement of variation in pixel values for at least a portion of a video image; and to use the measurement of variation in pixel values as an index to a lookup table to determine a quantization value to be used in encoding the video image, the lookup table comprising a relationship between video encoding rate and variation in pixel signal values.

64. (Previously Presented) The system of claim 63, wherein:

quantization value comprises quantization step size;

video encoding rate comprises a number of bits needed to encode the portion of video image; and

the table comprises a relationship between the number of bits and variation in pixel signal values of a plurality of video images for a plurality of quantization step sizes.

65. (Previously Presented) The system of claim 64, wherein the plurality of video images comprise video images including different types of macroblocks.

66. (Previously Presented) The system of claim 65, wherein the types comprise at least one of the following: intra, inter, 4 MV, and B.

67. (Previously Presented) The system of claim 63, wherein the measurement of the variation comprises at least one of the following: the sum of absolute differences (SAD) of the pixel signal values, and/or a quantization value of the SAD of the pixel signal values.

68. (Previously Presented) The system of claim 63, wherein the portion of the video image comprises a macroblock.